

***Abstract***

1           A high resolution sheet metal scanner employs machine vision to check a sheet metal part  
2 or the like for accuracy of punched or drilled holes or other structure. A high-resolution line-  
3 scanning camera mounted to an X-Y table, located in an environmentally sealed lower assembly.  
4 The sheet metal part is placed upon a transparent support plate. The line-scan camera is  
5 precision focused on the top surface of the glass support plate. An elongated linear illuminator is  
6 situated above the glass plate. The illuminator extends in the X direction and moves in the Y  
7 direction. The camera is transported in the X and Y directions on a carriage of the X-Y table. A  
8 computer control may be used for controlling the camera and the X-Y table. The drive for the  
9 camera and for the illuminator are mechanically independent.